FLAME SENSOR

FS-1000E (Power: 33' (10m) contact)

TAKEX®

Flame sensor FS-1000E quickly detects ultraviolet rays contained in flames and activates a built-in alarm sound plus an open collector output.

Features

- **POWER SUPPLY**
  The FS-1000E can be powered from either type-3 alkaline battery x 2 pcs, or an external power source 9 ~ 30 VDC depending on the application. Optional power source can be from a long life lithium battery.

- **EXTERNAL OUTPUT TO A SECURITY SYSTEM**
  Equipped with a form A (N/O) open collector output, FS-1000E can be connected to a security control panel. Alternatively the output signal can be used to initiate a warning device, e.g. bell, siren etc., when used with an external DC power supply.

- **OPERATION SET-UP BY DETECTION TIMER**
  The alarm will be activated only when the sensor detects a flame (ultraviolet rays) in accordance with the detection timer. The 3 following detection times are selectable by a slide switch located on the sensor body.
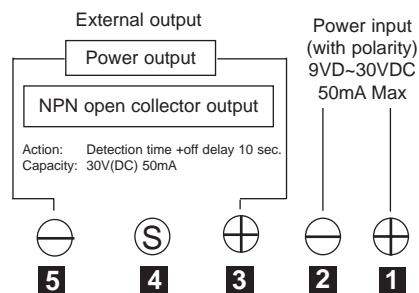 H: 0.2 sec.   M: 1 sec.   L: 6 sec.

- **OTHER FEATURES**
  - The internal alarm sounder output is greater than 80dB at 3.3' (1m) in front of the sensor. The internal sounder can be disconnected by cutting a jumper wire if required when using an external DC power supply.

  - Compact design enables FS-1000E to be installed at any location. Easy separation of the sensor unit from the base simplifies installation and maintenance.

  - Low battery
    When using a battery power source, low battery condition is annunciated by an internal buzzer and external LED.

  - Power up
    When power is turned on, an alarm sound is activated. If no alarm sound is activated, check the power source.

Specifications

Model	Flame Sensor
Model Number	FS-1000E
Detection System	Ultraviolet rays detection
	(Detected wave length 180 ~ 260 mm)
Detection Area	33' (10m) (2.75"(7cm) lighter frame, in front)
Detection Angle	Approx. 120° (conically)
Detection Timer	3 steps changeover by slide switch
	H: (0.2 sec.), M: (1 sec.), L: (6 sec.)
Power Supply	•Type-3 alkaline battery (LR6) x 2(3V)... accessory
	•Exclusive lithium battery (CR17450E-R-2-CM2) x 1 (3V)...optional
	•External power supply 9VDC to 30VDC with polarity
Current Consumption	Stand by : 50µA Max. when battery power supply
	5mA Max. when external power supply
	Alarm : 50mA Max. when buzzer sounds
LED	Indication: Red LED
	Alarm: Flashing every 0.2 sec. during off-delay approx. 10 sec.
	(Low battery: Light on 0.1 sec, every approx. 5 sec.)
Buzzer	Alarm: Sounds intermittently every 0.2 sec. during off-delay 10 sec.
	Low battery: Sound 0.1 sec. intermittently every approx. 5 sec.
	Volume: 80dB or more 33' (10m) ahead
	(Silent setting is available by cutting internal jumper line)
External Output	NPN open collector output
	(useful as an output with voltage when external power is used)
	30V DC/ 50mA, off-delay 10 sec. continuous output
Wiring Method	Terminals
Ambient Temperature	-10°C to +60°C (+14°F to +140°F) without condensation
	Battery performance may decrease
	under 0°C(+32°F) or beyond +40°C (+104°F)
Installation Places	Indoor (Ceiling or wall mount)
Weight	Approx. 200g (7oz) including battery (accessory) 50g (1.8oz)
External Dimensions	ø4.72" (120mm) x H 1.58" (40mm)
External Appearance	ABS resin(white)
Accessory	•Exclusive battery case of Type-3 x 2 pcs. x 1
	•Type-3 alkaline battery LR6 x 2
	•Sensor locking screw Ø3 x 6, x 1
	•Tapping screw Ø4 x 25, 2

Due to ongoing product improvements, specifications may change without notice.

Coverage (m/feet)

(FRONT VIEW : CEILING MOUNT)
(TOP VIEW : WALL MOUNT)

(SIDE VIEW : CEILING & WALL MOUNT)

Condition of Detection Area

Detection Timer : H (0.2 sec.)
Size of Flame   : Approx. 2.75" (7cm)
Origin of Flame : Gas Lighter
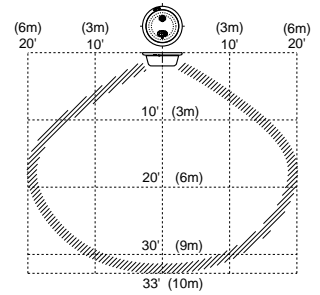
Physical Dimensions (mm/inch)
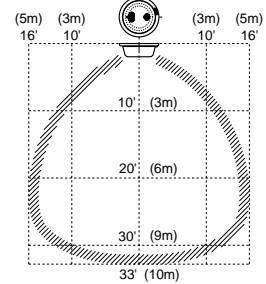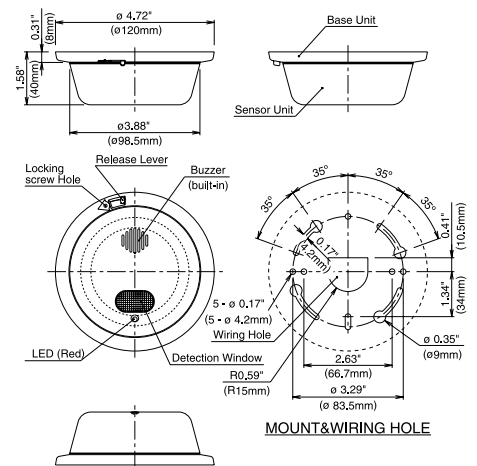

Terminal Arrangement

Note: This sensor is designed to detect intrusion and to initiate an alarm. It is not a burglar-preventing device. TAKEX is not responsible for damages or losses caused by accidents, thefts, Acts of God (including inductive lightning), abuses, misuses, abnormal usages, faulty installation or improper maintenance.